

Probability Theory and Mathematical Statistics

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LK/mg
11-4-59

FISZ, M. (Warsaw)

Some non-parametric tests for the k-sample problem. Col math 7
no.2:289-296 '60. (EEAI 10:1)

1. Mathematical Institute of the Polish Academy of Sciences.
(Sampling (Statistics))
(Distribution (Probability theory))

FISZ, M.

Remarks on the sample functions of some stochastic processes. Bul
Ac Pol mat 8 no.6:355-358 '60. (EEAI 10:6)

1. Institute of Mathematics, Polish Academy of Sciences. Presented
by H. Steinhaus.
(Probabilities) (Functions) (Continuity)

EHRENFEUCHT, A., FISZ, M.

A necessary and sufficient condition for the validity of the weak
law of large numbers. Bul Ac Pol mat 8 no.9:583-585 '60.

1. Institute of Mathematics, Polish Academy of Sciences. Presented
by E. Marczewski.

(Numbers, Theory of)

FISZDON, Wladyslaw

FISZDON, Wladyslaw: O pewnej metodzie obliczania amplitud drgan wymuszonych
(A Certain Method of Calculation of the Amplitude of Constrained Vibrations).
Warsaw: State Scientific Publications, 1954. 9 pages. Contains resume,
summary, bibliography. Published from the PAN Research Laboratory of
Mechanics of Continuous Media. Price 4 zl. (First Published in Rozprawy
Inzynierskie, Vol. I, No. 9).

POL. MN
V3313. Fisardon, W., The use of the admittance method in calculating forced aircraft vibration amplitudes, taking into account internal damping (in Polish), *Arch. Bud. maszyn* 1, 2, 123-104, 1954.

The concept of the admittance method introduced by Carter as dynamic flexibility is better known now as the receptance method. The main advantage of the receptance method is that it permits complicated systems to be broken down into simpler parts. Until now the practical possibilities of the method have not been thoroughly explored. Mr. Fisardon extends the method to complex systems with internal damping.

In the first part he introduces the receptance by developing elementary vibration formulas. (The same results could be obtained by substituting $1/q$ where q is receptance, instead of K for stiffness in well-known formulas.) Later he derives receptance formulas for flexible beams (for bending and torsion), assuming that internal damping is proportional to the velocity of the deformation; further, for a body suspended on four springs with damping, he calculates receptance of a complex system from the receptance of known elements.

With examples for various damping (0.025 to 0.3 of critical) of a flexible three-mass system (aircraft frame), he shows the influence of damping on forced vibration in this particular case. Aircraft vibrations can be reduced by larger damping in the frame and an engine suspension system which is softer and has larger internal damping.

This interesting study of theoretical and practical importance is concluded with a calculation of approximate receptance in complex cases by Galerkin and Lagrange methods.

SP 600
A. L. Nasvytis, USA

FISZDON, Wladyslaw

A method of calculating the flow in a divergent nozzle with oscillating walls. Archiw mech 14 no.3/4:641-649 '62.

1. Division de Mecanique des Fluides, Institute des Problemes Fondamentals Techniques, Academie Polonaise des Sciences, Varsovie.

MISZTAL, F., prof. dr inz.; FISZDON, W., prof. dr inz.

The eightieth anniversary of the birth of Professor Bohdan Stefanowski. Archiw bud masz 10 no. 3: 215-218 '63.

1. Sekretarz Wydziału IV, Polska Akademia Nauk, Warszawa (for Misztal).
2. Dziekan Wydziału Mechanicznego Energetyki i Lotnictwa, Politechnika, Warszawa (for Fiszdon).

EMT(1)/EWP(m)/EMT(m)/T/PCS(k)/EWA(h) Pd-1/P1-4 AEDC(s)/SSD/SSD(b')/
PSD/AFWL/ASD(f)-3/ASD(p)-3/AFETR RM
P/1031/64/016/10210, 37-241
AP4048999

AUTHOR: Ruszdon, W. (Warsaw)

TITLE: A simple qualitative estimate of the effect of oscillating pressure on the shape of a detached shock wave B

SOURCE: Archiwum mechaniki stosowanej, v. 16, no. 2, 1964, 237-241

TOPIC TAGS: qualitative estimate, effect, oscillating pressure, shock wave, detached shock wave, waveform

ABSTRACT: An attempt was made theoretically to estimate the effect of oscillating pressure at the surface of a simple blunt body on the oscillatory displacement of the shock wave. The simplified case of hypersonic Newtonian stationary flow in the stagnation region close to the axis of symmetry was considered. Formulas were derived for estimating the nondimensional time delay t_s required for a pressure disturbance on the body to reach the shock wave for two cases: that of plane flow over a circular section with pressure oscillations on the body surface being of the same amplitude and phase (also, the pulsations propagate radially for small angles θ , where θ is the

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angle between the normal to the shock wave and the direction of the free-stream flow) and of the three-dimensional flow over a blunt body. The assumptions of the plane case. Then, the effect of the angle θ on the time delays taken by a pressure pulsation to arrive at two positions given by θ_1 and θ_2 can be calculated. The results were illustrated by a calculation of the frequency of pressure oscillations between $\theta_1 = 0^\circ$ and $\theta_2 = 15^\circ$. It is shown that the time delays needed to produce a change of sign are high, especially at low Mach number of plane flow, and increase very slowly at higher Mach numbers, but drop rapidly at lower Mach numbers. Recommended lines for further investigation are: study of lower velocities with assumptions giving closer approximations to real flow conditions in front of a blunt body, use of numerical methods in the above oscillatory cases, and study of the effect of oscillations on the subsonic region behind the shock wave on the supersonic region. Work in this field is being continued. Orig. art. has: 3 figures.

ASSOCIATION: Department of Fluids, IBTP, Polish Academy of Sciences

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FISZER, A.

Two decades. p. 434, (WIEDZA I ZYCIE, Vol. 21, No. 7, July 1954,
Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 5
May 1955, Uncl.

FISZDON, W.

A simple qualitative estimation of the effect of oscillating pressure on the detached shock-wave shape. Archiw mech 16 no.2:237-241 '64.

1. Department of Liquids and Gases, Institute of Basic Technical Problems, Polish Academy of Sciences, Warsaw.

FISZER, B.

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
Organic Chemistry

③ Chey
Tetraalkyl thiopyrophosphates. B. Fiszer and J. Michalski (Politech., Lodz, Poland). Roczniki Chem. 25, 514-18 (1951) (English summary).—Tetraalkyl thiopyrophosphates of the thioanhydride type were prep'd.: (A) by condensation of the corresponding dialkyl chlorophosphonates with salts of dialkyl thiophosphoric acids according to $(RO)_2P(O)SNa + Cl(O)P(OR)_2 \rightarrow (RO)_2P(O)S(O)P(OR)_2 + NaCl$, and (B) by action of H_2S on dialkyl chlorophosphonates in the presence of a tertiary base (e.g. C_6H_5N) according to $2(RO)_2P(O)Cl + H_2S + 2C_6H_5N \rightarrow (RO)_2P(O)S(O)P(OR)_2 + 2C_6H_5N \cdot HCl$. The following thiopyrophosphates were prep'd.: *tetra-Et*, $b_{10} 120-2^\circ$, (74%); *tetra-isob-Pr*, $b_{10} 82-4^\circ$ (66%), *tetra-Bu*, $b_{10} 112-14^\circ$ (72%), and *tetra-isob-Bu*, $b_{10} 96-8^\circ$ (72%). G. A. W.

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POL.

3160

547-241-122 : 815.9 : 577.153.623.3

Wierzy D., Michalski J., Wieczorkowski J. Organophosphorus Compounds of Arsenic and Selenium. I. Synthesis of Tetraalkylthiopyrophosphates. "Fizjologiczno pochodne sarku i selenu. I. Syntesy tiopiroforandów czteroalkilowych". Roczniki Chemii (PAN), No. 4, 1953, pp. 462-483.

Two methods of preparation of tetraalkylthiopyrophosphates $(\text{RO})_4\text{POPO(OH)}_2$ are described: 1) by condensation of the salts of O,O-dialkylthiophosphate acids with dialkylchlorophosphates; 2) by action of hydrogen sulphide on alkylchlorophosphates in the presence of tertiary amines. Tests were made of the toxicity of the compounds obtained and of their anticholinesterase activity.

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FISZÉR, B.

•POL.

Organophosphorus compounds of sulfur and tellurium. I.
Synthesis of tetraalkyl thiopyrophosphates. Jerzy Fiszer, Jan Michałski, and Jan Wieczorkowski (Antowice, Łódź, Poland). *Roczniki Chem.* 27, 482-83 (1953) (English summary).—Tetraalkyl thiopyrophosphates, $(RO_2PO)_2SP(O)(OR')$, may be prep'd. by: (1)—condensation of Na O_2O -dialkylthiophosphates with dialkyl chlorophosphates or (2)—action of H_2S on dialkyl chlorophosphates in the presence of tertiary amines. Toxicity and anticholinesterase activity of the products were studied. Dialkyl chlorophosphates were prep'd. using the method described previously (cf. *C.A.* 49, 2306c). Na O_2O -dialkylthiophosphates were obtained by adding 0.25 mole powd. S in small portions with stirring and outside cooling to a mixt. of 0.2 mole Na dissolved in 60 ml. dry ROH and 0.21 mole dialkyl phosphite in 30 ml. dry Et₂O. Stirring was continued after all the S was added until the mixt. was warm up to room temp. The excess S was filtered and the filtrate was evapd. under reduced pressure at room temp. The cryst. product was washed 3 times with Et₂O and evapd. each time. Di-Et phosphite gave 95% yield (based on Na) crude (EtO)₂P(O)SNa (I), m. 188° [m. 203° (from CHCl₃-Et₂O)]. Crude I was used in further syntheses. $(BiO_2POCl)_2$ (II) (21.5 g.) (0.125 mole) added dropwise with vigorous stirring to a refluxing mixt. of 24 g. (0.125 mole) powd. dry I and 120 ml. anhyd. Et₂O, refluxed for 30 min., dild. with 100 ml. CH_3OH , washed successively with: 100 ml. water contg. a few drops pyridine, 60 ml. 1% HCl, 50 ml. water, 60 ml. 5% NaHCO₃, and 50 ml. water, dried with Na₂SO₄ and distd. twice gave 20 g. (65%) (EtO)₂P(O)SP(O)(OEt)₂ (III), b.p. 120-2° [d. 1.855, n_D^{20} = 1.4300]. Similarly, (MeO)₂

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PO(OEt)_3 (IV) and $(\text{MeO})_2\text{POCl}$ gave 21% $(\text{MeO})_2\text{P(OEt)}_2$ (V), yellow liquid, b_{25} 123-30° (decompn. slightly), d_{25}^{20} 1.08-0° (bath at 100°), $d_{25} = 1.33/0$, $n_{D}^{20} = 1.4519$. IV and II gave 50% $(\text{MeO})_2\text{P(O)SP(O)(OEt)}_2$ (VI), colorless liquid, b_{25} 110°, $d_{25} = 1.2538$, $n_{D}^{20} = 1.4129$. I and $(\text{BuO})_2\text{POCl}$ gave 57 g. crude product which in a mol. distn. (at 0.001 mm., condenser at 20 mm. from liquid surface, distg. at 5 drops/min.) gave the following fractions: (1).—0 g., temp. of liquid 50-68°, $n_{D}^{20} = 1.4393$; (2).—13.5 g., temp. of liquid 68°, $n_{D}^{20} = 1.4471$, 16.8% P. [calcd. for $(\text{BuO})_2\text{P(O)SP(O)(OEt)}_2$], 17.1% P; (3).—27.5 g., temp. of liquid 97°, $n_{D}^{20} = 1.4415$, 14.5% P; (4).—2.5 g., temp. of liquid 117°, $n_{D}^{20} = 1.4340$. I and $(\text{PrO})_2\text{POCl}$ (VII) gave 77% $(\text{PrO})_2\text{P(O)SP(O)(OEt)}_2$, colorless liquid, b_{25} 103.5°, $d_{25} = 1.1347$, $n_{D}^{20} = 1.4420$. II (34.5 g., 0.2 mole) was added dropwise with stirring at 10-15° to 70 ml. dry pyridine and a strong stream of H_2S was passed through the stirred and cooled mixt. for 90 min. The pptd. $\text{C}_6\text{H}_5\text{N}\cdot\text{HCl}$ was filtered and washed twice with 75 ml. C_6H_5 . The combined filtrates were distd. under reduced pressure and the residue taken up in 100 ml. C_6H_5 , washed successively with 30 ml. 2% HCl , 30 ml. water, 30 ml. 5% NaHCO_3 , and 30 ml. water, dried with Na_2SO_4 , and distd. twice gave 23 g. (74%) III, b_{25} 82-4°. An 85% yield of III was obtained when *N*-methylmorpholine (dil. with C_6H_5) was used instead of pyridine. Similarly, VII and H_2S in pyridine gave 67% $(\text{PrO})_2\text{P(O)SP(O)(OPr)}_2$ (VIII), colorless liquid, b_{25} 94-6°, $d_{25} = 1.1075$, $n_{D}^{20} = 1.4363$; $(\text{iso-PrO})_2\text{POCl}$ gave 70% $(\text{iso-PrO})_2\text{P(O)SP(O)(OPr-iso)}_2$ (IX), colorless liquid, b_{25} 82-4°, $d_{25} = 1.0888$, $n_{D}^{20} = 1.4370$; $(\text{BuO})_2\text{POCl}$ gave 73% $(\text{BuO})_2\text{POSP(O)Bu}_2$ (X), yellow liquid, b_{25} 112-14°, $d_{25} = 1.0374$, $n_{D}^{20} = 1.4617$; $(\text{iso-BuO})_2\text{POCl}$ gave 72%

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BERNARD FISZER

$(\text{iso-BuO})_2\text{P}(\text{O})\text{SPO}(\text{OBu-4})_2$, (III), colorless liquid, b.p. 93-94°, $d_4^{25} = 1.0488$, $n_4^{25} = 1.4463$; $(\text{MeO})_2\text{POCl}$ (below 5°) gave a syrupy, malodorous liquid, insol. in org. solvents, sol. in water. Et_3N (0.25 mole) added dropwise to 0.2 mole di-Et phosphite and 0.6 mole CCl_4 and treated with HgS with stirring at 5-10° for 3 hrs. gave 85% III. All boiling points are uncor. Tetraalkyl thiopyrophosphates are insecticides. The following doses (in g./kg. wt. of animal) were fatal to mice and rats when injected intramuscularly: III, 0.000655; V and X, 0.00035; VI, 0.001; VII, 0.0025; IX and XI, 0.05. All compds. stopped cholinesterase activity in rat brain, III being the most active and approaching parathion in effectiveness. J. R. Soezer

FISHER, BERNARD

P.D.E.

Synthesis of α,β -unsaturated compounds based on phosphonocetic ester and its analogs. Addition of phosphonocetic ester, alkylated phosphonocetic ester, and phosphonocetic nitrile to α,β -unsaturated esters and nitriles. Bernard Fisher and Jan Michalski (Higher Polytechnic School, Warsaw, Poland). *J. Prakt. Chem.* 28, 185-90 (1955) (English summary). — $\text{CH}_2\text{PO}(\text{OEt})_2$ (I), $(\text{Et}_2\text{O})_2\text{P}(\text{OEt})_2$ (II), CH_2CN (IV), and alkylated I (III) in the presence of alk. catalysts undergo Michael condensation with α,β -unsatd. esters and nitriles at 20-80° in CH_2Cl_2 or PhMe (less satisfactory results are obtained in aq. soln.). III are less reactive than I or II while the order of decreasing reactivity of α,β -unsatd. compounds (IV) is: alkylates > crotonates, methacrylates > $\text{PhCH}_2\text{CHCO}_2\text{Et}$ (V). Condensation of active reagents (e.g., I with $\text{CH}_2=\text{CHCN}$ (VI) or $\text{CH}_2=\text{CHCO}_2\text{Me}$ (VII)) is exothermic, requires small amt. of catalyst, and yields a mixt. of mono- and disubstituted derivs. Condensation of a reactive P compd. with less reactive IV requires heating, more catalyst and can be stopped at the first stage, while the poorly reactive compounds do not condense even under drastic conditions due to steric hindrance. A mechanism of condensation is given. To 23 g. Na finely dispersed in 400 ml. dry xylene was added with cooling and stirring (Hg-sealed stirrer) 139 g. $\text{HPO}(\text{OBz})_2$ (VIII), followed by 150 g. $\text{CH}_2=\text{CHCO}_2\text{Et}$ (IX), the mixt. heated 5 hrs. on the bath at 60°, NaCl centrifuged off, the xylene removed, and the residue distd.

(R.S.H.)

or 1.5 hr. then the column was eluted with 100 ml. of 10% MeOH in CH₂Cl₂ (XII), n_{D}^{20} 1.47-1.48, μ_{D}^{20} 1.4367 (all bps. and traps, uncol.). XII was added with stirring (frequent stirring) to a mixt. of 15 g. E in 200 ml. xylene (60°C. reaction), the mixt. cooled and to it was added 47 h g. BuLi, the pH. neutralized, the filtrate washed with 10% HCl, H₂O, 5% NaHCO₃, and H₂O, the xylene layer dried over Na₂SO₄, the solvent removed, and the residue distilled, as above, yielding 62 g. (EtO)₂POCH₂CO₂Et (XII), n_{D}^{20} 1.21-2.1, μ_{D}^{20} 1.4363, μ_{D}^{20} (P(OEt)₂) (XIII) (49 g.) and 88 g. Et₂AlClCO₂Et were refluxed 4 hrs. on the oil bath at 165° and the mixt. was dried, as above, yielding 52 g. (EtO)₂POCH₂CO₂Et, n_{D}^{20} 1.52-4°, μ_{D}^{20} 1.4296. To the suspension of 9.2 g. XII in 200 ml. xylene was added 55.2 g. VIII, followed by 50 g. MeCH₂CO₂Et, the mixt. refluxed 3 hrs. at 60°, the npt. filtered off, and the reaction product worked up as above, yielding 55 g. (EtO)₂POCH₂CO₂Et, n_{D}^{20} 1.50-1°, n_{D}^{20} 1.4282, XII (88.8 g.) and 40 g. ClCH₂CN were refluxed 4 hrs. in the oil bath at 165-70°.

and the mixt. was distd. as above, yielding 71 g. II, b_{105} 124-8°, n_D^{20} 1.4370. VI (15.9 g.) was added (stirring, CaCl_2 tube) to a mixt. of 100 ml. CaH_2 , 0.69 g. Na, and 7.2 g. X kept at 25° (ice-water cooling), the mixt. heated 3 hrs. at 65°, cooled, neutralized with AcOH , washed with water, NaHCO_3 soln., and again with water, dried over Na_2SO_4 , the solvent removed, and the residue distd. *in vacuo* (procedure A), yielding the following fractions: Unchanged X (18 g.), b_{105} 74-96°, $(\text{EtO})_2\text{P}(\text{O})\text{CH}(\text{CH}_2\text{CH}_2\text{CN})\text{CO}_2\text{Et}$ (35 g., b_{105} 100-20°, 33 g. after redistn., b_{105} 112-17°, n_D^{20} 1.4470, d_4^{20} 1.1163), and $(\text{EtO})_2\text{P}(\text{O})\text{C}(\text{CH}_2\text{CH}_2\text{CN})\text{CO}_2\text{Et}$ (XIII) (19 g.), b_{105-40} 118-60°. X (67.2 g.) was added (stirring, CaCl_2 tube) to 100 ml. dry CaH_2 and 2.5 g. K (highly exothermic reaction), the mixt. cooled to room temp. and to it was added 31.8 g. VI at 45-50° (ice-water cooling), the mixt. then heated 3 hrs. at 60°, left 12 hrs. at room temp., and worked up as in A, yielding 69 g. XIII (procedure B), b_{105} 145.7°, n_D^{20} 1.4030, d_4^{20} 1.1401. X (50% excess) treated with VII by procedure A, yielding 57% $(\text{EtO})_2\text{P}(\text{O})\text{CH}(\text{CH}_2\text{CH}_2\text{CO}_2\text{Me})\text{CO}_2\text{Et}$, b_{105} 90°, n_D^{20} 1.4448, d_4^{20} 1.1408. $(\text{EtO})_2\text{P}(\text{O})\text{C}(\text{CH}_2\text{CH}_2\text{CO}_2\text{Me})\text{CO}_2\text{Et}$ was prep'd. in 67% yield by procedure B, using 35% excess VII, b_{105} 126-9°, n_D^{20} 1.4568, d_4^{20} 1.1084. $(\text{EtO})_2\text{P}(\text{O})\text{CH}(\text{CH}_2\text{CH}_2\text{CO}_2\text{Et})\text{CO}_2\text{Et}$ (XIV) was prep'd. in 66% yield.

from $\text{CH}_3\text{Me}_2\text{CHCO}_2\text{Et}$, a stoichiometric amt. of X , and 20% excess X , using procedure A (negligible heat effect), $\text{b}_{100} 85^\circ$, $n_D^{20} 1.4458$, $d_4 1.1032$. $(\text{EtO}_2\text{P}(\text{O})\text{CH}(\text{CH}_2\text{Ph})\text{CH}_2\text{CO}_2\text{Et})\text{CO}_2\text{Et}$ was prepd. in 50% yield from X and V under the same conditions as XIV , $\text{b}_{100} 138^\circ$, $n_D^{20} 1.4578$, $d_4 1.1307$. $(\text{EtO}_2\text{P}(\text{O})\text{CBu}(\text{CH}_2\text{CH}_2\text{CN})\text{CO}_2\text{Et}$ (XV) was prepd. in 73% yield from XI and VI (procedure A), using 0.1 molar K per mole of XI , $\text{b}_{100} 116-118^\circ$, $n_D^{20} 1.4512$, $d_4 1.0631$. $(\text{EtO}_2\text{P}(\text{O})\text{CBu}(\text{CH}_2\text{CH}_2\text{CO}_2\text{Me})\text{CO}_2\text{Et}$ was prepd. in 73% yield from XI and VII , using procedure analogous to XV , $\text{b}_{100} 117-119^\circ$, $n_D^{20} 1.4520$, $d_4 1.0973$. $(\text{EtO}_2\text{P}(\text{O})\text{C}(\text{CH}_2\text{CH}_2\text{CN})\text{CO}_2\text{Et}$ was prepd. from II and VI (procedure B). The crude product after the removal of the solvent was crystal. from CCl_4 and ether, yield 80%; colorless needles, m. 73.5-41°, easily sol. in C_6H_6 , alc., difficulty in water, and petr. ether. Adam Sporzyński

POLAND

PIŚMIER, Bernard, of the Department of Organic Chemistry, Institute of Technology
(Katedra Chemicznej Organicznej, Politechnika, Łódź), in Łódź.

"Organophosphorus Compounds with an Active Methylene Group. Part V. Thermal
Decomposition of Diethoxyphosphinylacetic Acid."

Warsaw, Roczniki Chemii, Vol 37, No 9, 1963, pp 949-954.

Abstract: English article, author's summary modified. Investigation of thermal
decomposition of diethoxyphosphinylacetic acid is described. It was found that
the reaction follows two parallel directions, namely, decarboxylation and
dealkylation. The latter is caused by the presence of carboxylic groups. No
thermal decomposition of α -dihydroxyphosphinylglutamic and dibenzylophosphinyl-
acetic acids occurs under similar conditions. Ten references, including 1 Polish,
2 Russian, and 7 Western.

1/1

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Dimethylsulphoxide, its chemical properties and possibilities
of application in medicine and biology. *Wiad. lek.* 18 no.5
459-461 1 Mr '65

1. Z Katedry Chemii Fizjologicznej i Ogólnej Wojskowej
Akademii Medycznej w Łodzi (Kierownik: doc. dr.med. M.Kanski).

FISZER, J.

Sewage treatment at Bassersdorf, Switzerland.

p. 391 (Gaz, Woda I Technika Sanitarna. Vol. 31, no. 10, Oct. 1957. Warszawa, Poland)

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February 1958

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Sewage treatment at Winterthur, Switzerland.

p. 393 (Gaz, Woda I Technika Sanitarna. Vol. 31, No. 10, Oct. 1957. Warszawa, Poland)

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Sewage treatment in Uster, Switzerland.

p. 389 (Gaz, Woda I Technika Sanitaran. Vol. 31, no. 10, Oct. 1957. Warszawa, Poland)

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Municipal and industrial sewage treatment. p. 224.

GAZ, WODA I TECHNIKA SANITARNA. (Stowarzyszenie Naukowo-Techniczne
Inżynierów i Techników Sanitarnych, Ogrzewnictwa i Gazownictwa)
Warszawa, Poland, Vol. 32, no. 6, June 1958.

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Uncl.

POLAND / Chemical Technology. Chemical Products and H-5
Their Application. Water Treatment. Sewage.

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 78129.

Author : Fiszer, Jozef.

Inst : Not given.

Title : Project of Experimental Station at The Town of
Poznan for Purification of Sewage with Application
of Tower Biofilters.

Orig Pub: Gaz, woda i techn. sanit., 1958, 52, No 2, 54-56.

Abstract: No abstract.

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Supplying the population and industry with water in Hungary,
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"Economic exploitation of water contained in the reservoir of a water-power electric plant", p. 282, (WIADOMOSCI ELECTROTECHNICZNE, Vol. 14, No. 12, Dec. 1954, Warszawa, Poland)

SO: Monthly List of East Accessions, (EEAL), LC, Vol. 4, No. 5, May 1955, Uncl.

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as an immediate requirement. p. 291.

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FISZER, W. The economic advantages of prestressed-ferroconcrete constructions in the light of the experiences of foreign industrial building p. 390

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So: East European Accession Vol. 4, No. 3, March 1957

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p. 277.

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Warszawa, Poland

So: East European ACcession, Vol. 6, No. 2, Feb. 1957

FISZER, W.

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organized by the Polish Electrical Engineers Association.

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SO: Monthly Index of East European Accessions (EEAI) LC Vol. 7, No. 5. 1958

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P. 85 (WIADOMOSCI ELEKTROTECHNICZNE) (Warsaw, Poland) Vol. 17, no.4, Apr. 1957

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The 5th World Power Conference in Vienna. p. 1.

(ENERGETYKA. Vol. 11, No. 1, Jan./Feb. 1957. Warszawa, Poland)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 10, October 1957. Uncl.

U. RISZUR.

11th Sectional Meeting of the World Power Conference in Belgrade, June 1957. p.169 .
(INFOMIĘTKA. Vol. 11, no. 4, July/Aug. 1957. Warszawa, Poland)

SO: Monthly List of East European Accessions (EPAI) LC. Vol.6, no. 12, Dec. 1957.
Uncl.

FISZER, W.

Industrial production of prestressed concrete elements in the Netherlands. p. 172.

(INZYNIERIA I BUDOWNICTWO, Vol. 14, No. 4, Apr. 1957, Warszawa, Poland.)

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from negotiations of the 11th Sectional Meeting of the World Power Con-
ference in Belgrade, in June 1957."

p. 221 (Wiadomosci Elektrotechniczne) Vol. 17, no. 9, Sept. 1957
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FISZER, Waclaw (Magister Engineer)

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Warszawa, Poland. Vol. 35, no. 3, Mar. 1959

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Uncl.

Fiszer, W.

Plans for further development of heating connected with electric-power production in Poland, by taking into consideration the current technical and economic conditions. p. 411

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Uncl.

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(Poland--Turbogenerators) (Poland--Steam)

FISZER, Wacław, mgr., inż.

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Energetyka Pol. 15 no.9:258-259 S "62"

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The Day of Power Engineering 1963. Energetyka Pol 17 no.8:
226-230 Ag '63.

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Concept of constructing a brown coal mine and a large power station in Belchatow. Przegl elektrotechn 39 no.12:457-460 D'63.

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Achievements of Polish power engineering in the recent 20 year period and its development prospects. Energetyka Pol 18 no. 7: 193-197 J1 '64.

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Development of power engineering in India. Przegl techn 86
no.22:2,4 '65.

Food Technology

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PEZACKI, W. and FISZER, W., of the Chair of Meat Technology, Higher School of Agriculture (Katedra Technologii Miesa WSR), Poznan. Prof. Dr. W. Pezacki, Head.

"An Attempt at Evaluating the Principal Transformation Products of 1,6¹⁴C Glucose in Raw Smoked Meat"

Lublin, Nedycyna Weterynaryjna, Vol 22, No 8, 1966, pp 486-495.

Abstract: The transformation products of labeled 1,6¹⁴C glucose in raw smoked meats were studied in four series comprising 32 samples each during 6 production days and 60 post-production storage days. Radioactivity of CO₂ combined in Ba¹⁴CO₃ after evolution from the meat was then determined. It was determined that fermentation of glucose in raw smoked meats is of the hetero type, and that it takes place only during production. Contains 6 tables and 15 references (6 Polish, 4 Western, 1 Russian and 4 German-language).

1/1

FISZMAN, Michal, mgr

Role of the technical press in the modernization of the
teaching procedures in occupational schools. Przegl techn
85 no. 43:1,11 25 0 '64.

1. Central Office of Educational Methods, Ministry of
Education, Warsaw.

ACC NR: AM7004071

Monograph

UR/

Kovalenko, Boris Mikhaylovich; Fit, Eduard Aleksandrovich

Digital equipment for automating the petroleum industry (Tsifrovyye ustroystva dlya avtomatizatsii neftyanoy promyshlennosti) Moscow, Izd-vo "Nedra", 66. 0266 p. illus., biblio. 1,900 copies printed

TOPIC TAGS: analog digital conversion, digital system, petroleum industry, logic element, automation

PURPOSE AND COVERAGE: The book discusses the elements and devices of digital engineering, and the methods of converting continuous values into discrete values and vice versa, and presents the principles of coding. Special codes which eliminate errors in the conversion of continuous values into discrete values, and the algorithms and circuits used in data processing in relation to specific matters pertaining to the petroleum and petrochemical industries are reviewed. The potentialities of digital devices shown by specific examples. Simplified algorithms and processing systems for digital data are presented. The book is intended for engineering and technical personnel dealing with problems of application of digital engineering in the petroleum and petro-

Card 1/2

UDC: 622. 32:682. 142. 32. 002. 5

ACC NR: AM7004071

chemical industry, and may be useful to students attending courses in automation and digital and measuring engineering at Schools of Higher Education of Petroleum Processing. The authors express their gratitude to L. B. Kublanovskiy, Candidate of Technical Sciences, for reviewing the book and for his advice.

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- Ch. 2. Logical elements and units of digital engineering -- 64
- Ch. 3. Basic circuits and devices used in converters -- 121
- Ch. 4. Digital presentation, printing of results, and punched output -- 148
- Ch. 5. Digital systems and devices -- 167

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SUB CODE: 09/ SUBM DATE: 28Apr66/ ORIG REF: 036/ OTH REF: 006

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FITAK, Bohdan; BOZYK, Zbigniew

Accuracy of Gerber's method of fat determination in cottage cheese
and processed cheeses with the Van Gulik butyrometer. Chem anal
8 no.2:233-238 '63.

1. Department of Food Investigation, Academy of Medicine, Warsaw.
Head of Department: prof. dr S. Krauze.

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Changing the design of brick facing of porthole damstones of shaft-type impact mills TP-230 boilers. Suggested by V.N. Fitalev. Rats. predl. no. 44:6-7 '59. (MIRA 14:1)
(Boilers)

FITALEV, V.N.

Making fire-clay concrete blocks for lining explosion valves and
inspection holes. Suggested by V.N. Fitalev. Rats. predl.
no. 44:7-8 '59. (MIRA 14:1)

(Boilers) (Fire clay)

1414 R&R, R.

MEDE/Pharmacology, Toxicology, Chemotherapeutic Preparations V

A) Antibiotics

Abstr Jour : Ref Zhar - Biol., No II, 1956, No 3206

Author : Bumila V.T., Pop O., Vasilescu I., Grozevici V., Popian R., Pitaresu A.

Inst : -

Title : The Dynamics of Immunological Indices in Patients with Typhoid Fever, Treated with Chloramphenicol.

Orig Pub : Rev. microbiol., parazitol., si epidemiol., 1956, 1, No 1, 33-42

Abstract : Results of observation of 34 patients with typhoid fever were described; the dynamics of agglutinins anti-O, H, Vi, and blood changes associated with chloramphenicol therapy (I) were studied. It was established that in I therapy the agglutinins anti-O have a lower titer or disappear completely. Later therapy with I has no effect on the appearance and dynamics of agglutinins. Agglutinins anti-Vi appear in 91 percent of the patients; in 5.8 percent of the

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cases during the first 2 weeks, in 24.4 percent of the cases - during the fourth week; in the remaining cases - between the second and fifth months. Absence of anti-Vi agglutinins among patients with relapses was observed before the relapses in 76.8 percent of the cases; a decrease of their titer or their disappearance - in 11.1 percent of the cases. The appearance of leucophilic and a lymphocytic reaction accompanied the appearance of anti-Vi agglutinins, or followed it directly. Thus - the post-infective immunity takes place also after I therapy, but it is established later. Vaccination with triple vaccine is useful for prevention of relapses and acceleration of immunity. --S.M. Shmyshen.

Card : 8/2

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ALEXANDRESCU, R.; ISACSON, I.; SON, C.; CRAVCEVSCHI, V.; ZILBERMAN, L.;
FITARAU, A.; JICMAN, M.

Clinical study of leptospirosis. Stud. cercet. inframicrobiol., Bucur.
8 no.2:259-280 1957.

1. Communicare prezentata la Institutul de inframicrobiologie al
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(LEPTOSPIROSIS

pathol. & epidemiol. of *L. pomona*, *L. canicola* & other
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BASILA, V.T., prof.; VASILESCU, I.; FITARAU, A.; CIOFLEC, D.

Serious staphylococcal septicemia with cavernous sinus thrombosis and bullous pneumonopathy. Microbiologia (Bucur) 6 no.1:25 Ja-F '61.

1. Clinica de boli contagioase, Timisoara.

BUSILA, V. T., prof.; VASILESCU, I., dr.; CUCUTUZ, L., dr.; ALEXANDRESCU, R., dr.;
POPIAN, R., dr.; FITARAU, A., dr.; PLACINTA, A., dr.; STAMBOLIU, D. W., dr.;
BACALOGLU, D., dr.; PANA, G., dr.; NOVACOVICI, O., dr.; COTLEAREVSCHI, V.,
dr.; COTLEAREVSCHI, E., dr.

Clinical and biological characteristics of a focus of trichinosis.
Med. intern., Bucur 13 no.2:227-236 F '61.

1. Clinica de boli contagioase, Timisoara (for Bacaloglu). 2. Spitalul
si Sanepidul Orsova (for Cotlearevschi).

(TRICHINOSIS)

S

RUMANIA/Human and Animal Morphology - The Skeleton.

Abs. Jour

: Ref Zhur Biol., No 5, 1959, 21530

Author

: Coronutan, Gh., Kun. Gh., Fitara, V., Rottenberg, N., Birzu, St., Elias, St., Fioreanu, M.

Inst Title

: Investigation of Tinctorial Reactions of the Fibrilar Bone Structure

Orig Pub

: Morfol. normala si patol., 1958, 3, No 1, 61-68

Abstract

: It has been shown in bone preparations decalcified with strong HNO_3 containing formalin that the principal fibrillar network is stained with aniline blue (Mallory), is demonstrated by the Halle reaction, is not impregnated with silver, and is isotropic. Certain fibrillar lamellae give reactions of the basic type; others are fuchsinophilic, notably argentophilic, and are very weakly demonstrated by the Halle reaction, and are double refractile. The authors

Card 2,

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TUDORAN, P., ing.; RADU, A., ing.; FITERAU, Victoria, ing.

Increasing the splintering capacity of woodprocessing tools.
by cyaniding treatment. Ind lemnului 15 no.6/7:231-236 Je-JL
'64.

FITERMAN, Ya. F.; GRANOVSKIY, S.A., redaktor; VORONETSKAYA, L.V.,
tekhnicheskiy redaktor.

[Assembling and repair of hydraulic turbines] Montazh i remont
gidroturbin. Leningrad, Gos.energeticheskoe izd-vo, 1952. 462 p.
(Hydraulic turbines) (MIRA 8:3)

FITERMAN, Ya. F., BARKOV, N. K. and N.A.POPOV

Eksplotatsiia gidroagregatov. Leningrad, Gosenergoizdat, 1949. 260 p. illus.
Bibliography: p. 260.

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Operation of hydraulic units.

DLC: TJ870.B3

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of
Congress, 1953.

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"Installing and repairing hydro-turbines." IA.F. Fiterman. Reviewed by A.N.
Goncharov. Elek.sta. 24 no.11:61-62 N '53. (MLRA 6:11)
(Water wheels) (Fiterman, IA.F.)

FITERMAN, Yakov Filippovich; BARKOV, N.K., red.; ZHITNIKOVA, O.S.,
tekhn. red.

[Assembly and maintenance of hydraulic turbines] Montazh i
remont gidroturbin. Izd.2., perer. i dop. Moskva, Gos. energ.
izd-vo, 1961. 553 p. (MIRA 15:3)
(Hydraulic turbines—Maintenance and repair)
(Hydroelectric power stations)

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Special enlarged session of the Scientific Council of the All-Union Scientific Research Institute for Shale Processing devoted to the problem of shale gas retorts. Trudy VNIIPS no.6:328-333 '58.

(Gas retorts--Congresses) (Oil shales) (MIRA 11:8)

~~T. E. M.~~ M. Fit, M.

Distr: 4E3c 2 cys

✓ The analysis by radio-activation of hafnium and some rare earths from a mining product containing zircon. Maria Fit and Constanta Mantescu (Inst. Al. Phys., Bucharest, Romania). Acad. rep. populare Romane, Studii cercetari chim. 7, 305-73 (1969).—Using the method of radio-activation of a mineral product of zircon, results were obtained in a simple way in cases where classical methods could not be used. The usual method for the detn. of Hf by radio-activation, measuring the activity of the isotopes Hf^{180} or Hf^{181} , was modified by measuring the activity of the Hf^{182} , which can be easily sepd. from the activity of Zr^{91} , from the disintegration curve. By the radio-activation method, although the object was not the analysis of ultramicro quantities of the elements (10^{-10} , 10^{-11} %), the Hf content (without the sepn. of Zr) and small amts. of rare earths were detd.

T. Damas

4
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RULP

BADANOIU, M.; FITI, M.; MANTESCU, C.

Analysis of the chemically pure silicon by radioactivation. Studii
cerc chim 7 no.4: 573-579 '59.
(EEAI 9:?)

1. Institutul de fizica atomica al Academiei R.P.R., Bucuresti.
(Semiconductors) (Silicon) (Radioisotopes)

FITI, M.; MANTESCU, C.; COSTEA, T.

Determination of boron in ores through the registration of particles
in the reaction $B^{10}(n,\alpha)Li^7$. Studii cerc fiz 11 no.2:423-430 '60.

(Ores) (Boron) (Lithium) (Neutrons)
(Nuclear counters) (Alpha rays). (EEAI 10:1)

MANTESCU, D.; FITI, M.

Measuring tritium and carbon-14 in the gaseous state. Studii cerc
fiz 11 no.3:788-798 '60. (EEAI 10:2)
(Tritium) (Carbon) (Radioisotopes)
(Counters (Electrons, ions, etc.) (Gases)

S/081/62/000/023/012/120
B149/B186

AUTHOR: Fiti, Maria

TITLE: Study of the nature of active surfaces of solid catalysts.
I. Active surface of Cr_2O_3 and NiO according to radiochemical data

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1962, 86, abstract
23B629 (Studii si cecetari fiz. Acad. RPR, v. 12, no. 2, 1961,
357 - 369 (Rum.; summaries in Russ. and French))

TEXT: The properties of the active surface of Cr_2O_3 and NiO were studied by
chemisorption of CO_2 , by the course of isotope exchange C^{14}O_2 (ads.)
+ CO_2 (gas) \rightarrow C^{14}O_2 (gas) + CO_2 (ads.), and by the differential isotope
method. The changes in the active surface of these catalysts under the
action of Co^{60} γ -radiation were investigated. [Abstracter's note:
Complete translation.]

Card 1/1

FITI, Maria; GAINAR, I.; GHERGHESCU, Ileana; GIRD, E.

Possibility of applying ion exchangers in the catalytic reaction
of acetylene hydration. Studii cerc chimie 10 no.2:243-249 '62.

1. Institutul de fizica atomica, Bucuresti.

FITI, Maria

Radiolysis of acetylene in solution. Pt.1. Rev chimie Roum
9 no.6//72451-461 Je-Jl '64

1. Laboratory of Radiochemistry, Institute of Atomic Physics,
P.O. Box 35.

FITI, M.

Radiolysis of acetylene in solution. Pt.1. Studii cerc chim
13 no.6/7:459-468 Je-Jl '64

1. Laboratory of Radiochemistry, Institute of Atomic Physics,
P.O. Box 35.

INITIALS, S. YA.

28(2)

PHASE I BOOK EXPLOITATION

SOV/2146

Leningrad. Universitet

Materialy po mashinnomu perevodu; sbornik 1 (Materials on Machine Translation; A Collection of Articles Nr 1) Leningrad, Izd-vo Leningr. univ., 1958. 228 p. 1,000 copies printed.

No contributors mentioned.

PURPOSE: The book is for students, scientists, and engineers interested in machine translation.

COVERAGE: This collection of 15 articles is published as volume I of the Materials on Machine Translation. It represents the work of 25 Soviet scientists at the Leningrad University Experimental Laboratory for Machine Translation which was created in March 1958 to continue research on translating with the aid of electronic machines. Although the present volume deals with both the theoretical and the practical aspect of machine translating, the emphasis is on the compilation of algorithms for a number of lan-

Card 1/4

Materials on Machine Translation (Cont.)

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guages, many of them Asiatic. There are no references.

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Bratchikov, I.L., S.Ya. Fitialov, and G.S. Tseytin. Dictionary
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Andreyev, N.D., B.P. Golovanov, L.I. Ivanov, and A.K. Ogloblin.
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Card 4/4

TM/bg
9-15-59

FITIALOV, S.Ya.

Language for nonalgebraic algorithms. NTI no.4:30-34 '63.
(MIRA 16:10)

FITILEV, B.V.; RUTES, V.S.

Widespread introduction of the continuous pouring of steel is a
work of great economic significance. Stal' 23 no.9:769-772 S
'63.
(MIRA 16:10)

OTKUPSHCHIKOVA, M.I.; FITIALOV, S.Ya.

System of morphological synthesis of the Russian language. NTI
no.1:39-46 '64.
(MIRA 17:3)

ANALYST: AP4049560 DATE: 5/03/15 BY: 64/2007/05/2015/05/2015

AUTHOR: Otkupshchikova, M. I.; Fitialov, S. Ya.

TITLE: A system of morphological synthesis for the Russian language

Source: Nauchno-Tekhnicheskaya informatsiya, no. 1, 1964, 39-46.

TOPIC TAGS: algorithm, machine translation, morphological synthesis, linguistics

ABSTRACT The paper considers a morphological synthesis in the Russian language, which is a machine translation of English text into Russian. The Russian language must take into account the following factors: the physical word form, word as the linear arrangement of words in a sentence, the word as the alphabetical real word form, the right word form, and the word as the cause of making such a synthesis. The machine translation machine dictionary, used in machine translation, and basically allows determination of the word in its dictionary to which a text refers, as well as determination of the correct word form in context. The present paper describes a computer program for the development of the morphological synthesis, and the results of its

ASSOCIATION: none

Card 1/2

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ACCESSION NR: AP4049560

SUBMITTED: 01Aug63 ENCL: 00 SUB CODE: 0P
NO REF SCV: 000 OTHER: 000

Card 2/2

TYPE: PWT(d)/BT/EED-2/EWP(1) P_R-d₁/P_k-d₁/P_{0-d}/P_{r-d} DATE: 10/12/64

MISSION NR: AP5000881

S-0013-61-000-007/0030/0036

AUTHOR: Fitisov, S. Ya.

TITLE: Two types of calculation B

SOURCE: Nauchno-tehnicheskaya informatsiya, no. 7, 1964, 30-36

TOPIC TAGS: machine translation, phrase structure, grammar, language structure, linguistics, calculus theory 166

ABSTRACT: Two classes of grammatical calculations are studied: direct calculation of the components used in machine translation, and so-called parenthetical calculations

In the first, it is shown that for any type of calculation there is an equivalent parenthetical calculation. The second part of the article is devoted to the types of languages associated with various types of calculations. The main types of components are presented. The main types of calculations are given. The types of determinate form. The transition to the determinate form is shown. The work done by N. Kromskiy and deals with an essential part of the interpretation of type C calculations. The main types of calculations are given. The following theorem is established: I Type P is equivalent to type C; II Type C is not equivalent to type P; III Class P-calculations and simple

Card 1/2

L 22528-65

ACCESSION NR: AP5000881

C-calculations are equivalent. Orig. art. has: numerous formulas.

ASSOCIATION: none

Card 2/2

L 12906-66

EWT(d)/BXT/T/EWP(1) ... IJP(c) BB/GG

ACC NR: AR5023490

SOURCE CODE: UR/0372/65/000/007/V047/V047

SOURCE: Ref. zh. Kibernetika, Abs. 7V310

AUTHOR: Fitialov, S. Ya.

13

B

TITLE: Transformation in axiomatic grammars

CITED SOURCE: Sb. Transformats. metod v strukturn. lingvist. M., Nauka, 1964, 3-11

TOPIC TAGS: cybernetics, machine translation, computer, linguistics

TRANSLATION: A classification of language models is proposed and the question on the place of transformations in various types of models is investigated. Three types of models are proposed for the study: 1) models of a concrete language^{16/47} or process; 2) models for studying theories of grammatical classes for concrete or intuitively understood models of type (1); 3) models for generating and studying sets of models of type (2). Under such classification the models of M. Khomskiy (RZhMat, 1959, 9578) are related to type (2), and the model proposed by O. S. Kulagina (Problemy kibernetiki, 1, pp. 203-214, M. Fizmatgiz, 1958) is related to type (3). It is noted that the author is not aware of any sufficiently complete models of type (1) for natural languages. Emphasis is placed on the necessity for distinguishing between concrete models of a language and formal computations defining classes of grammatical models. Ye. Stotskaya

SUB CODE: 09/
Card 1/1 NW

UDC: 801:51

FITILEV, B.V.; GUBERT, S.V.; OSIPOV, A.I.

Prospects for expanding the continuous casting of steel. Stal'
23 no.10:889-892 0 '63. (MIRA 16:11)

1. Gosudarstvennyy komitet po chernoy i tsvetnoy metallurgii pri
Gosplane SSSR, Gosudarstvennyy soyuznyy institut po proyektiro-
vaniyu metallurgicheskikh zavodov i TSentral'nyy nauchno-issledo-
vatel'skiy institut chernoy metallurgii.

Fitileva, L. M.

Fitileva, L. M. -- "Influence of a Therapeutic Diet on the Functional State of the Kidneys in Patients with Hypertensive Disease." Second Moscow State Med Inst imeni I. V. Stalin, Moscow, 1955 (Dissertation for the Degree of Candidate of Veterinary Sciences)

SO: Knizhnaya Letopis', No. 24, Moscow, Jun 55, pp 91-104

GEL'STEYN, G.G. (Moskva, Leninskiy prospekt, 8, kv. 18); FITILEVA, L.M.

Some auscultative and phonocardiographic data in mitral stenosis.
Grud.khir. 1 no.1:31-41 Ja-F '59. (MIRA 13:6)

1. Iz laboratori elekrokardiografii i fonokardiografii Insti-
tuta grudnoy khirurgii AMN SSSR (dir. - prof. A.A. Busalov, nauch-
nyy rukovoditel' - akad. A.N. Bakulev).
(MITRAL VALVE--DISEASES)

GEL'SHTEYN, G.G.; FITILEVA, L.M. (Moscow)

Some ausculatative and phonocardiographic data in mitral stenosis.
Terap.arkh. 31 no.4:55-62 Ap '59. (MIRA 14:5)

1. Iz laboratorii elektrokardiografii Instituta grudnoy khirurgii
AMN SSSR (dir. - akademik A.N.Bakulev).
(MITRAL VALVE—DISEASES) (HEART—SOUNDS)